

cancer discovered by miniature mass radiography.

Of course, mass radiography has widened its scope since its introduction in the early 1940s. It has become a service, a tool for presymptomatic diagnosis. X-ray departments in hospitals are neither meant nor equipped to do this.

To destroy such a service without even taking regional differences and problems into consideration is a retrograde step.—I am, etc.,

G. Z. BRETT,
Director, Mass Radiography Service,
North-west Metropolitan Region.
London W.9.

REFERENCES

- ¹ *Daily Mail*, 12 November 1969.
² Department of Health and Social Security, H.M. (69) 27

Unnecessary X-rays

SIR,—How much I agree with Dr. R. M. Scott (13 December, p. 689). This, however, is another field in which the patient well versed in the pitfalls of medical practice by an assiduous following of current T.V. programmes is becoming increasingly critical of the doctor. Let the doctor assert that the injury is trivial. In the eyes of the patient he remains "guilty until proved innocent" by the all-powerful x-ray machine. The same trend is detectable in regard to E.C.G.s for chest pain.

There are schools of thought which maintain an x-ray is an indispensable part of the examination of any and every injury, and in any case a wise casualty officer will always err on the side of caution. There remain, however, cases where he should be able to say "absolutely no sign of fracture" and stick to it. There is a limit beyond which no doctor should be willing to be pushed by a public more generously endowed with anxiety than reason.

Unless we keep the machine in its rightful subservient place to basic clinical discipline the practice of the art of medicine is in danger of becoming just another technology.—I am, etc.,

S. L. HENDERSON SMITH.
Huddersfield, Yorks.

Pregnancy Tests Over the Counter

SIR,—May I be permitted to point out one good reason why pregnancy testing "over the counter" or by commercially advertised laboratories, or in any other way, on patient demand should not be encouraged?

It is because there is no specific test for pregnancy. Methods of determining the presence of chorionic gonadotrophin in the urine have been available for a number of years. The older tests required the use of animals and could therefore only be undertaken by certain specially qualified individuals. The newer chemical tests can soon be learnt by anyone. Even a "do-it-yourself" kit is not out of the question. If such a test is positive in a young woman who has missed one or two periods, the probability is that she is pregnant. If, however, a positive result is obtained in a woman of, say, 46 who has missed one or two periods, she may or may not be pregnant. The chorionic gonado-

trophin is present, but the explanation may simply be the early menopause. Women in this age group are demanding "a pregnancy test" simply to differentiate between these two possibilities, and this the tests are not capable of doing.

As you say (20 September, p. 667), the common reason for wanting early information nowadays is to seek abortion, and if reliance is placed on the test she may then be referred for consideration of abortion, often with form H.S.A. 1 completed by two doctors "acting in good faith." Clinical examination immediately reveals that there is no pregnancy to abort, and all this medical time and effort has been wasted, to say nothing of the emotional stress to which the patient has unnecessarily been put (I have had half a dozen such cases this year).

This laboratory test, like many others, may supplement clinical examination. It can never replace it.—I am, etc.,

WALTER CALVERT.

Department of Postgraduate Studies,
Stepping Hill Hospital,
Stockport.

Life Cycle of *Toxoplasma gondii*

SIR,—We wish to report the elucidation of the life-cycle of the parasite *Toxoplasma gondii*. Specific-pathogen-free domestic cats were fed with tissue cysts containing *Toxoplasma gondii*. In two infected cats large numbers of oocysts were produced in the faeces; no oocysts were observed in the faeces of the uninfected control cat. Five days after the feeding of the toxoplasmas, profuse schizogonic and gametogonic stages were observed in the epithelial cells of the small intestine of one infected cat. A single schizont was observed in an intestinal epithelial cell of a second cat, six days after being fed the tissue cysts. There was no evidence of schizogony or gametogony in the uninfected control cat. The stages observed in the intestinal epithelium are identical with those of the well-known endogenous cycles of coccidian parasites. The appearance of these stages, together with the nature of the oocyst, indicates that *Toxoplasma gondii* is a coccidian parasite closely related to the genus *Isospora*.

Full details of this work will be published in an early issue of the *B.M.J.*—We are, etc.,

W. M. HUTCHISON.
J. F. DUNACHIE.

Department of Biology,
University of Strathclyde,
Glasgow G.1.

J. CHR. SIIM.
K. WORK.

Department of Toxoplasmosis
and Viral Diseases,
Statens Seruminstitut,
Copenhagen, Denmark.

Unusual Effect of Fenfluramine

SIR,—The recent letters about fenfluramine interest me because my colleagues and I have reported on the drug's effects in acute normal dosage¹ and overdose² and are currently studying its central nervous effects during chronic administration.

Dr. S. Brandon (29 November, p. 557) describes tooth-grinding after a youth took

a single dose of "half a dozen or so" tablets of fenfluramine (Ponderax). Brief periods of nocturnal tooth-grinding occur widely in normal persons and we have observed such episodes, of half a minute or so, to become more common during administration of 80 mg. fenfluramine daily. Overdosage of 20–40 tablets in three young women caused striking coarse tremor of the jaw.³ Dr. Brandon recommends that the drug should be regarded with as much suspicion as other "central nervous stimulants." We certainly found¹ that it does have some amphetamine-like properties, but it is an interesting compound in that these properties are modified by, for example, a tendency to cause subjective sleepiness (Dr. G. Ellis, 29 November, p. 558). While also it is of value to know from Dr. Brandon that his patient experienced an adverse reaction between a monoamine oxidase inhibitor and fenfluramine, the same could have happened with Marmite, and the fault should lie, not with fenfluramine, but with the prescription of any amphetamine derivative concomitantly with a monoamine oxidase inhibitor.

Dr. Brandon raises the important matter of whether fenfluramine might be a drug that invites abuse. In our recent research Dr. S. A. Lewis and I have found that sudden withdrawal, after prolonged administration, can be accompanied by temporary mood depression. Nevertheless, it would seem from the evidence that in the majority of persons the initial subjective effects are not pleasurable. Two of our young women patients had sat down together and eaten 50 Ponderax as an experiment. They found the consequences very unpleasant.¹ Dr. Brandon's patient, in a similar experiment, also found the effects unpleasant. The patient's comment, "I wouldn't have known they were pep pills," indicates the difference from other drug experiences he may have had.

Slimming pills were, by reputation, pep pills in the minds of our two patients. The reported cases, however, would not seem to allow the inclusion of fenfluramine in such a generalization.—I am, etc.,

IAN OSWALD.

University Department of
Psychiatry,
Royal Edinburgh Hospital,
Edinburgh.

REFERENCES

- ¹ Oswald, I., Jones, H. S., and Mannerheim, J. E., *British Medical Journal*, 1968, 1, 796.
² Riley, I. D., Corson, J. C., Maider, I., and Oswald, I., *Lancet*, 1969, 2, 1162.

Mental Problems in Rheumatoid Arthritis

SIR,—Your leading article on personality trends in rheumatoid arthritis is most timely (8 November, p. 319). This is a field of considerable importance in the full assessment and management of rheumatoid arthritis.

In this department we have been studying personality patterns in all cases of rheumatoid arthritis over the past five years. Eysenck's Personality Inventory (E.P.I.) has been applied to all new cases and, further, has been repeated at the end of three years. In addition, after four or five visits of the patient to the department when rapport has been established between the patient and doctor, further more detailed studies of personality and environmental background have been